

## Proposal Full View

### Applicant Information

Organization Name  \*

Tax ID **0**

Proposal Name Development and Use of a Numerical Groundwater-Flow Model of the Six Basins \*

Proposal Objective The objective of this proposal is to develop, calibrate, and use a new computer-simulation groundwater-flow model of the Six Basins to evaluate the project alternatives of the Six Basins Strategic Plan. The new model will use MODFLOW and will be joined with the existing Chino Basin model to more accurately simulate important groundwater and surface-water interactions between the Six Basins and Chino Basin. \*

### Budget

Other Contribution	<input type="text" value="\$0.00"/>
Local Contribution	<input type="text" value="\$279,856.00"/>
Federal Contribution	<input type="text" value="\$0.00"/>
Inkind Contribution	<input type="text" value="\$0.00"/>
Amount Requested	<input type="text" value="\$250,000.00"/> *
Total Project Cost	<input type="text" value="\$529,856.00"/> *

### Geographic Information

Latitude \* DD(+/-)  MM  SS

Longitude \* DD(+/-)  MM  SS

Longitude/Latitude Clarification	Represents Center of Six Basins, Claremont, CA	Location	Six Basins Groundwater Basin (underlies portions of Cities of Claremont, LaVerne, Pomona, Upland)
County		Los Angeles *	
Ground Water Basin		San Gabriel Valley	
Hydrologic Region		South Coast	
Watershed	San Gabriel River and Santa Ana Watersheds		

### Legislative Information

Assembly District	59th Assembly District,60th Assembly District,61st Assembly District,63rd Assembly District *
Senate District	29th Senate District,31st Senate District,32nd Senate District *
US Congressional District	District 26 (CA),District 38 (CA) *

## Project Information

Project Name

Implementing Organization	Three Valleys Municipal Water District
Secondary Implementing Organization	Six Basins Watermaster
Proposed Start Date	4/1/2013
Proposed End Date	9/30/2014
Project Scope	See Attachment 5. 125 characters is not enough space to summarize.
Project Description	See Question 2 of the Applicant Information and Question's Tab. This space does not provide enough space to copy over the Project Description provided in Question 2.
Project Objective	The objective of this proposal is to develop, calibrate, and use a new computer-simulation groundwater-flow model of the Six Basins to evaluate the project alternatives of the Six Basins Strategic Plan. The new model will use MODFLOW and will be joined with the existing Chino Basin model to more accurately simulate important groundwater and surface-water interactions between the Six Basins and Chino Basin.

## Project Benefits Information

Project Objective

## Budget

Other Contribution	<input type="text" value="0"/>
Local Contribution	<input type="text" value="279856"/>
Federal Contribution	<input type="text" value="0"/>
Inkind Contribution	<input type="text" value="0"/>
Amount Requested	<input type="text" value="250000"/>
Total Project Cost	<input type="text" value="529856"/>

## Geographic Information

Latitude DD(+/-)	<input type="text" value="34"/>	MM <input type="text" value="5"/>	SS <input type="text" value="48"/>
Longitude DD(+/-)	<input type="text" value="117"/>	MM <input type="text" value="43"/>	SS <input type="text" value="11"/>

Longitude/Latitude  
Clarification

Represents Center of Six

Location Six Basins Groundwat

County Los Angeles Ground Water Basin San Gabriel Valley Hydrologic Region South Coast WaterShed  
San Gabriel River and Santa Ana Watersheds

## Legislative Information

Assembly District	59th Assembly District,60th Assembly District,61st Assembly District,63rd Assembly District
Senate District	29th Senate District,31st Senate District,32nd Senate District
US Congressional District	District 26 (CA),District 38 (CA)

## Section : Applicant Information and Question's Tab

### APPLICANT INFORMATION AND QUESTION'S TAB

#### Q1. Applicant Information

**Provide the agency name, address, city, state, and zip code of the applicant submitting the application.**

Three Valleys Municipal Water District 1021 East Miramar Avenue Claremont, CA 91711

#### Q2. Proposal Description:

**Provide a brief abstract of the Proposal. This abstract must provide an overview of the proposal including the main issues and priorities addressed in the proposal. Within the abstract, please describe how the proposal relates to the GWMP's BMO's.**

The Six Basins are a group of adjacent groundwater basins, located in eastern Los Angeles and western San Bernardino Counties. The pumping rights from the Six Basins were adjudicated in 1998 through a stipulated judgment in the Superior Court of California for the County of Los Angeles. The Judgment prescribes a physical solution for the coordinated management of the Six Basins with the objective that the parties to the Judgment can reliably pump their respective rights and maximize the beneficial use of groundwater. The Judgment also established the Six Basins Watermaster (Watermaster) to implement the physical solution. The Watermaster parties have about 13 years of experience with implementing the physical solution, and some parties have raised questions and concerns about the current rules, regulations, agreements, and practices of the Watermaster. In 2012, the Watermaster parties collectively agreed to enhance the management of the Six Basins beyond the execution of the Judgment and initiated the development of a Strategic Plan. Stakeholder objectives include: maintaining or improving the operating safe yield (OSY) of the Six Basins, maintaining and/or improving groundwater quality?especially in areas where beneficial uses are constrained by poor quality, minimizing losses due to rising groundwater and/or subsurface outflow to the Chino Basin, optimizing management of the Six Basins such that all Watermaster parties can reliably pump their share of the OSY, and implementing monitoring programs to improve the hydrogeologic understanding of the Six Basins to help achieve these goals. Phase 2 of the Strategic Plan development will begin in 2013 and is aimed at developing and evaluating the specific components of the Strategic Plan. There will be a clear need to predict and evaluate the long-term effects of implementation of the Strategic Plan to assure that the objectives of the stakeholders will be achieved. This evaluation will require the use of computer-simulation models of surface water and groundwater. The most current computer-simulation model of the Six Basins area was upgraded and re-calibrated in 2006. This model is a proprietary finite-element model that is not in the public domain. Finite-element models are no longer industry-standard models. The goal of this proposal is to develop, calibrate, and use a new computer-simulation groundwater-flow model, using industry-standard codes that are in the public domain, to evaluate the project alternatives of the Strategic Plan. The new model will use the United States Geological Survey's finite-difference model, MODFLOW, which is now considered the de facto standard code for aquifer simulations. The new model will be joined to the existing Chino Basin MODFLOW model to more accurately simulate the important

groundwater and surface-water interactions between the Six Basins and the Chino Basin. These interactions are important to understand for the conjunctive management of both groundwater basins. The scope of work for this project includes developing a conceptual model of the Six Basins area, building and calibrating a numerical groundwater-flow model in MODFLOW, developing and simulating a Baseline Alternative (the uncoordinated plans of the parties), developing and simulating four alternatives of the Strategic Plan (the coordinated plans of the parties), and preparing a final report that includes recommendations for the scope and schedule of the Strategic Plan. The project will be vetted through a stakeholder process at public monthly meetings of the Watermaster. The MODFLOW model developed for this project will be a key tool for the implementation of the Strategic Plan and for ongoing management of the Six Basins which will be funded by the Watermaster. Ongoing work will include continued data collection, periodic re-calibration of the model, and the addition of a water-quality module to simulate the fate and transport of constituents of concern.

### Q3. Project Director:

**Provide the name and details (including email) of the person responsible for executing the grant agreement for the applicant. Persons that are subcontractors to be paid by the grant cannot be listed as the Project Director.**

Project Director: Rick Hansen Title: General Manager Organization: Three Valleys Municipal Water District  
Address: 1021 East Miramar Avenue, Claremont, CA 91711 email: rhansen@tvmwd.com phone:(909) 621-5568

### Q4. Project Manager:

**Provide the name and contact information (including email) of the Project Manager from the applicant agency or organization that will be the day-to-day contact on this application.**

Project Manager: Andy Malone, PG Title: Principal Geologist Organization: Wildermuth Environmental Inc.  
Address: 23692 Birtcher Drive, Lake Forest, CA 92630 email: amalone@wildermuthenvironmental.com office  
phone: (949) 420-3030 direct line: (949) 600-7503 fax: (949)420-4040

### Q5. Additional Information:

**Based on the region's location, what is the applicable DWR region office (Northern, North Central, South Central, or Southern)? The following link can be used to view each DWR region office boundaries:**

[http://www.water.ca.gov/groundwater/groundwater\\_basics/gw\\_contacts\\_info.cfm](http://www.water.ca.gov/groundwater/groundwater_basics/gw_contacts_info.cfm)

- 1) ☐ Northern Region
- 2) ☐ North Central Region
- 3) ☐ South Central Region
- 4) ☒ Southern Region

### Q6. Additional Information:

**Provide the Date of GWMP Adoption, if any, and list the pursuant Water Code Section or other legal Authority in which it was adopted.**

In the fall of 1998 a stipulated agreement for the adjudication of the Six Basins was filed with the Superior Court of California for the County of Los Angeles. The Honorable Judge William O. McVittie signed the stipulated Judgment titled "Southern California Water Company vs. City of La Verne, et al." (Case No. KC029152) on December 18, 1998.

### Q7. Additional Information:

**GWMP, recognition of county ordinances in permitting processes, or party to a groundwater basin adjudication order).**

The TVMWD and the Six Basins Watermaster (Watermaster) are partners in this grant application, with the TVMWD being the formal applicant and project director and Watermaster being the lead agency conducting the project. The Watermaster is responsible for the implementation of the Six Basins Judgment, which is the Groundwater Management Plan for the project area. The TVMWD is a party to the Six Basins Adjudication (State of California Superior Court of Los Angeles County pursuant to the Judgment, Case No. KC029152, 12/18/1998).

**Q8. Additional Information**

**Name the entity(ies) providing the fund(s) reported in the above Budget section under the category "Other Contribution". If there are no "Other Contributions" Please answer this question with, "No Other Contributions".**

No "Other" Contributions. The Six Basins Watermaster is providing the "Local" Contribution.

**Q9. Eligibility:**

**List the urban water suppliers that will receive funding from the proposed grant. Please provide the agency name, a contact phone number and email address. Those listed must submit self certification of compliance with CWC §525 et seq. and AB1420, see Attachment 10. If there are none, so indicate.**

The TVMWD and the Six Basins Watermaster (Watermaster) are partners in this grant application. The TVMWD is an urban water supplier. The Watermaster is a court-appointed entity, not subject to AB 1420 compliance. Three Valleys Municipal Water District Rick Hansen, General Manager email: rhansen@tvmwd.com phone:(909) 621-5568 Address: 1021 East Miramar Avenue, Claremont, CA 91711 A self-certification of TVMWD's compliance with CWC Section 525 et. seq. and AB1420 is included as attachment 10. One original copy with wet-signatures is included with the hard copy submittal of this application.

**Q10. Eligibility:**

**Have all of the urban water suppliers, listed in Q9 above, submitted complete 2010 UWMP to DWR? If not, explain why. Have those plans been verified as complete by DWR? If not, explain current status.**

The Board of Directors of the TVMWD adopted the 2010 Urban Water Management Plan (UWMP) on May 18, 2011. The 2010 UWMP was submitted to DWR on June 16, 2011. The plan was verified as complete by the DWR in December 2011.

**Q11. Completeness Check:**

**Have all of the fields in the application been completed?**

Yes

**Q.11. Completeness Check (cont)**

**If no, please explain. If yes, answer this question with "NA".**

NA

**Section : Application Attachments Tab**

**APPLICATION ATTACHMENTS TAB**

**Attachment 1. Authorizing Documentation**

**Upload authorizing documentation here. Ensure file name is consistent with the LGA Grant PSP, Section II. "How to Submit An Application".**

Last Uploaded Attachments: Att1\_LGA12\_TVMWD\_AuthDoc\_1of1.pdf

### **Attachment 2. Eligible Applicant Documentation**

**Upload eligible documentation here. Ensure file name is consistent with the LGA Grant PSP, Section II. "How to Submit An Application".**

Last Uploaded Attachments: Att2\_LGA12\_TVMWD\_EligDoc\_1of1.pdf

### **Attachment 3. Status of GWMP**

**Upload the GWMP documentation here. Ensure file name is consistent with the LGA Grant PSP, Section II. "How to Submit An Application".**

Last Uploaded Attachments: Att3\_LGA12\_TVMWD\_GWMP\_1of1.pdf

### **Attachment 4. Project Description**

**Upload project description here. Ensure file name is consistent with the LGA Grant PSP, Section II. "How to Submit An Application".**

Last Uploaded Attachments: Att4\_LGA12\_TVMWD\_ProjD\_1of1.pdf

### **Attachment 5. Work Plan**

**Upload work plan here. Ensure file name is consistent with the LGA Grant PSP, Section II. "How to Submit An Application".**

Last Uploaded Attachments: Att5\_LGA12\_TVMWD\_WrkPln\_1of1.pdf

### **Attachment 6. Budget**

**Upload budget here. Ensure file name is consistent with the LGA Grant PSP, Section II. "How to Submit An Application".**

Last Uploaded Attachments: Att6\_LGA12\_TVMWD\_BUDGET\_1of1.pdf

### **Attachment 7. Schedule**

**Upload schedule here. Ensure file name is consistent with the LGA Grant PSP, Section II. "How to Submit An Application".**

Last Uploaded Attachments: Att7\_LGA12\_TVMWD\_SCHED\_1of1.pdf

### **Attachment 8. Quality Assurance**

**Upload quality assurance documentation here. Ensure file name is consistent with the LGA Grant PSP, Section II. "How to Submit An Application".**

Last Uploaded Attachments: Att8\_LGA12\_TVMWD\_QA\_1of1.pdf

### **Attachment 9. Past Performance**

**Upload past performance documentation here. Ensure file name is consistent with the LGA Grant PSP, Section II. "How to Submit An Application".**

Last Uploaded Attachments: Att9\_LGA12\_TVMWD\_PERFORM\_1of1.pdf

**Attachment 10. AB1420 and Water Meter Implementation Compliance**

**Upload 1420 and water meter implementation documentation here, if applicable. Ensure file name is consistent with the LGA Grant PSP, Section II. "How to Submit An Application".**

Last Uploaded Attachments: Att10\_LGA12\_TVMWD\_1420\_1of1.pdf

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